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JOHN C. GORECKI, ESQ.			PHAN, TRI H	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

john@gorecki.us

## Office Action Summary

Application No.

10/617,192

Applicant(s)

BERNIER ET AL.

Examiner

TRI H. PHAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Response to Amendment/Arguments*

1. This Office Action is in response to the Response/Amendment filed on November 27<sup>th</sup>, 2007. Claims 12-24 are now canceled. Claims 1-11 are now pending in the application.

### *Claim Objections*

2. Claim 4 is objected to because of the following informalities:

In claim 4, line 2, "mplements" is a typographical error; it should be correct to -- implements --.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by **Lemieux, Yves** (U.S.6,452,942; hereinafter refer as '**Lemieux**').

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- In regard to claim 1, **Lemieux** discloses, *a network device that is able to be remotely interfaced once deployed in the field* ('DSLAM or WL-DSLAM or radio head module 222' in the wireless local loop arrangement 200 in figs. 2-3; for example see col. 3, lines 46-50). *comprising a computer-readable medium containing instructions for controlling at least one processor to implement control logic* (wherein hard drive or memory, e.g. "computer-readable medium", is inherently in the WL-DSLAM for storing program instructions, e.g. "instructions", to control the WL-DSLAM's processors in performing functions as disclosed in figs. 4-5; col. 5, lines 4-5) to

*interface with a central office to receive data and control signals from the central office* ('NMS or server 209' in fig. 2; for example see col. 2, lines 47-63; wherein DSLAMs connect with the server, e.g. "central office", via POP ATM switch to support delivering broadband applications as disclosed in col. 4, lines 33-39; col. 7, line 61 through col. 8, line 26);

*interface with a plurality of network access subscribers* ('network terminal NT 226A-C', 'devices D1-3 230A-C') *to provide network access to the network access subscribers* (for example see fig. 2; col. 4, lines 14-32); and

*interface with a wireless control unit* ('POP ATM switch 212' in fig. 2) *to receive control signals from a local control unit* ('NMS or server 209' in the common carrier network in fig. 2; for example see col. 7, line 61 through col. 8, line 26) *and enable the control unit* ('local wireless-DSLAM control 306' in fig. 3) *to perform diagnostic operations on the network device or to control operation of the network device* ('WL-DSLAM radio head 222' in figs. 2-3; for example see col. 2, lines 57-63; col. 5, lines 4-25; wherein the WL-DSLAM controls resource allocation for distribution channels based on the subscriber's profiles such as subscriber's

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throughput requirements and QoS parameters provided by the NMS 310), *while the network device is deployed in the field and without requiring the operator to come into direct contact with the network device to effect the control or diagnostic operations on the network device* (for example see col. 7, line 61 through col. 8, line 26; wherein procedure, such as call set-up process, is accomplished automatically through control and signaling messages, e.g. “*without requiring the operator to come into direct contact with the network device to effect the control operations on the network device*”, at WL-DSLAM as disclosed in fig. 5).

- Regarding claim 4, **Lemieux** further discloses, *wherein the control logic that interfaces with the plurality of network access subscribers* (‘network terminal NT 226A-C’, ‘devices D1-3 230A-C’) *implements digital subscriber line access multiplexer functionality to enable the network device to operate as a Digital Subscriber Line Access Multiplexer* (‘DSLAM’ in figs. 1-2; col. 3, lines 35-45) *for the plurality of network access subscribers which interface with the network device* (for example see figs. 2-3; col. 1, lines 9-11); *and wherein the plurality of network access subscribers interface with the network device over subscriber loops connected to the network device* (for example see fig. 2; col. 1, lines 9-11).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-3, 5-6 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lemieux, Yves** (U.S.6,452,942).

- In regard to claims 2-3, **Lemieux** does disclose in fig. 2, where DSLAMs 218A-B, 222 are connected with POP ATM switch 212 via paths 216A-B, 220, e.g. “*optical communications link*”, for transporting OC-3 optical signal from the common carrier network 204 such as SONET or SDH, e.g. “*passive optical network*”; but fails to explicitly disclose about “*optical port*”. However, it is obvious that the “*optical port*” is just the interface or port of the DSLAM connect with the POP ATM switch, for transporting the optical signal OC-3 via path 216 A-B, as disclosed in col. 3, line 66 through col. 4, lines 8.

Thus it would have been obvious to one with ordinary skill in the art at the time of invention to include the “*optical port*” into the **Lemieux**’s DSLAM module, with the motivation being to provide interface for transmitting/receiving optical signal via optical path, as with different network implementations for the system as disclosed in col. 9, lines 1-12.

- Regarding claims 5-6, **Lemieux** also discloses in figs. 2-3, where the WL-DSLAM is connected with POP ATM switch through wireless link 220 (“*wireless signal*”; for example see fig. 2; col. 4, lines 9-14) to receive control and signaling messages from the NMS, e.g. “*receive the control signals from the local control unit*”, and to control resource allocation for distribution by the control block 306 (“*control logic*”) as disclosed in col. 5, lines 4-25; col. 7, line 61 through col. 8, line 26; and where the WL-DSLAM is connected with network terminal NT 226A-C and devices D1-3 230A-C, e.g. “*wireless subscribers*”, through wireless link 224A-C for

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delivering broadband applications as disclosed in col. 4, lines 14-39; but fails to explicitly disclose about “*internal/external wireless antenna*”. However, “antenna” is well known means in the art for receiving/transmitting signal through wireless network.

Therefore, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to include an “internal wireless antenna” in the **Lemieux**’s wireless DSLAM module, with the motivation being to provide means for receiving/transmitting wireless signal from wireless network as disclosed in col. 1, lines 9-11; col. 2, lines 17-19.

- In regard to claims 9-10, **Lemieux** does disclose in fig. 2, wherein the system 200 is provided as with SONET/SDH in high-speed common carrier network 202 and as with DSL technology in distribution portion 240 (for example see col. 1, lines 33-65; col. 3, lines 46-54; col. 4, lines 33-46; wherein, it is obvious that different protocol, e.g. “*first protocol*” and “*second protocol*”, is implementing for different environment for SONET/SDH and DSL, e.g. “*xDSL based technology*”); but fails to explicitly disclose about “*Ethernet*”. However, Ethernet protocol is well known in the art for transferring data in LAN environment in telecommunication and **Lemieux** also discloses that system may be used with different types of technology and network implementations (for example see col. 9, lines 18-22).

Therefore, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to use “Ethernet” as preferred protocol for communicating at local loop with central office CO as system design choices.

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7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lemieux, Yves** (U.S.6,452,942) in view of **Johnson, Harold W.** (U.S.6,845,248; hereinafter refer as '**Johnson**').

- In regard to claim 7, **Lemieux** discloses a local loop arrangement system for providing wire/wireless access to remote site users via digital subscriber line access multiplexers or control from NMS ("*receiving control signal from local control unit*"; for example see fig. 2; col. 2, lines 21-63), under the control of the control block of the DSLAM ("*wireless control unit*"; for example see fig. 3; col. 5; lines 4-25). It appears that **Lemieux** may not explicitly disclose the "*infrared port*" or "*ultrasonic port*" for receiving infrared/ultrasonic signal. However, such limitation lacks thereof from **Lemieux** reference is well known and disclosed by **Johnson**.

In an analogous art, **Johnson** discloses a network device for exchanging communications between premise customers and broadband networks via DSLAM's wireless interfaces for receiving free-space optical signal or high GHz wireless signal (for example see figs. 2 and 4; Abstract; col. 6, line 40 through col. 7, line 30); where "*infrared signals*" or other free-space optical signals are disclosed in col. 7, lines 41-49; and wherein "*infrared port*" is just the interface or "port" of the transceivers 401-402 for receiving/transmitting infrared signal over communication links.

Thus it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the **Johnson**'s *infrared port* into **Lemieux**'s DSLAM module, with the motivation being to provide interface for transmitting/receiving infrared signal via



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communication links, as with different network implementations for the system as disclosed in

**Lemieux**: col. 8, lines 52-62.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lemieux, Yves** (U.S.6,452,942) in view of **Voit et al.** (U.S.2002/0044567; hereinafter refer as '**Voit**').

- In regard to claim 8, **Lemieux** also fails to disclose where the DSLAM comprises a "packet queue" for storing transmission packets of data and a "switch fabric" for switching packets to the network access subscribers. However, such implementation is known in the art.

For example, **Voit** discloses a CPE/ATU-R device 1000 ("*network device*"; for example see fig. 10), which further comprises a *packet queue* ('buffer 1006' in fig. 10) to store packets of data for transmission and a *switch fabric* ('router circuitry 1004' in fig. 10) to switch packets to the network access subscribers (for example see page 19, paras [0185-0187]).

Thus it would have been obvious to one with ordinary skill in the art at the time of invention to implement **Voit**'s invention such as *buffer* and *router circuitry* into **Lemieux**'s DSLAM module, with the motivation being to performing functions such as determining which port to forward packets to destination and holding packets to prevent loss problem while processing for routing as disclosed in **Voit**: pages 1-2, para [0009].

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lemieux, Yves** (U.S.6,452,942) in view of **Pience, Roger D.** (U.S.2002/0073434; hereinafter refer as '**Pience**').

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- In regard to claim 11, **Lemieux** does disclose different methods for solving problem if malfunction condition is found (for example see col. 7, lines 27-37); but fails to explicitly disclose method for “*providing emergency services*” to network access subscribers over the interface with the wireless control unit. However, such implementation is known in the art.

In an analogous art, **Pience** discloses a system and method for supporting broadband communications services; wherein method for providing power for the network interface unit that permitting lifeline services to continue even during power outages to the system, e.g. “*providing emergency services*”, is disclosed in Abstract; pages 1-2, para [0007]; page 2-3 para [0019].

Thus it would have been obvious to one with ordinary skill in the art at the time of invention to incorporate **Pience**’s *emergency services* into the **Lemieux**’s wireless system, with the motivation being to able for providing emergency services to subscribers during power outages as disclosed in : page 2, para [0007], lines 4-8.

### ***Response to Amendment/Arguments***

10. Applicant's arguments filed on November 27<sup>th</sup>, 2007 with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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**Lemieux, Yves** (U.S.6,762,992) and **Lohman et al.** (U.S.2002/0154629) are all cited to show devices and methods for improving communication in local loop access network, which are considered pertinent to the claimed invention.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on (571) 272-3179.

**Any response to this action should be mailed to:**

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**Commissioner of Patents and Trademarks**

Washington, D.C. 20231

or faxed to:


**(571) 273-8300**

Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tri H. Phan/  
February 25, 2008

  
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SUPERVISORY PATENT EXAMINER  
2/25/08